

## CLAIMS

1. A loud speaker comprising:
  - a frame bonded to a magnetic circuit;
  - 5 a diaphragm bonded to an outer periphery of the frame;
  - a voice coil that is bonded to the diaphragm and is partly disposed
  - in a magnetic gap of the magnetic circuit; and
  - a protector bonded to the frame so as to cover the diaphragm,
  - wherein a net made of material containing at least metal is bonded
  - 10 to the protector.
2. The loud speaker of claim 1,
  - wherein the protector is made of resin material.
- 15 3. The loud speaker of claim 1 or claim 2,
  - wherein the net contains resin material.
4. The loud speaker of claim 1 or claim 2,
  - wherein the net contains copper material.
- 20 5. The loud speaker of claim 1 or claim 2,
  - wherein the net contains nickel material.
6. The loud speaker of claim 1 or claim 2,
  - 25 wherein the net contains both copper material and nickel material.
7. The loud speaker of claim 1 or claim 2,

wherein the net is bonded to the magnetic circuit.

8. A module formed by bonding the loud speaker of claim 1 or claim 2 to an electronic circuit.

5

9. An electronic apparatus including the loud speaker of claim 1 or claim 2.

10. A device including the loud speaker of claim 1 or claim 2.

10

11. A loud speaker comprising:

a frame bonded to an internal magnetic circuit including a main magnet;

a diaphragm bonded to an outer periphery of the frame;

15

a voice coil that is bonded to the diaphragm and is partly disposed in a magnetic gap of the internal magnetic circuit; and

a protector bonded to the frame so as to cover the diaphragm,

wherein a repulsion magnet is bonded to the protector at a position where the repulsion magnet faces an upper plate constituting the internal magnetic circuit at a distance.

20

12. A loud speaker comprising:

a frame bonded to an external magnetic circuit including a main magnet;

25

a diaphragm bonded to an outer periphery of the frame;

a voice coil that is bonded to the diaphragm and is partly disposed in a magnetic gap of the external magnetic circuit; and

a protector bonded to the frame so as to cover the diaphragm,  
wherein a repulsion magnet is bonded to the protector at a position  
where the repulsion magnet faces a center pole of a lower plate constituting the  
external magnetic circuit at a distance.

5

13. The loud speaker of claim 11,

wherein a plate is bonded to the repulsion magnet on the opposite  
side to the diaphragm.

10

14. The loud speaker of claim 11 or claim 12,

wherein the repulsion magnet constitutes the magnetic circuit and  
is bonded to the protector.

15. The loud speaker of claim 11 or claim 12,

15

wherein the protector is made of resin material.

16. The loud speaker of claim 11 or claim 12,

wherein the protector is made of magnetic material.

20

17. The loud speaker of claim 11 or claim 12,

wherein the protector is made of nonmagnetic material.

18. The loud speaker of claim 16,

wherein the protector is brought into contact with the magnetic  
25 circuit including the main magnet.

19. A module formed by bonding the loud speaker of claim 11 or claim 12

to an electronic circuit.

20. An electronic apparatus including the loud speaker of claim 11 or claim 12.

5

21. A device including the loud speaker of claim 11 or claim 12.